

PATENT

Serial No. 10/037,630; Filing Date: January 3, 202
Examiner Paul D. Marcantoni, Art Unit 1755
Attorney Docket No. 72425.0105

III Remarks

A. Rejection of Claims 1– 20 as New Matter

Claims 1–20 remain pending in the application. Claim 1 has been amended by deleting a previous amendment that the Examiner held to be new matter. Applicant has also made a new amendment to claim 1 to a preferred embodiment of the invention that further distinguishes the invention from the prior art on the basis of a practical application achieved by the invention that is not disclosed, exemplified or suggested in the prior art. The new amendment appears in the amended claim 1 as a new clause added at the end of the definition of suboperations group (2.1), immediately before the beginning of the definition of suboperations group (2.2).

This new amendment specifies that in Applicant's claimed process for constructing load-bearing structures, the load-bearing structure produced has sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch. This amendment is based on the specification at page 24, line 30 through page 25, line 12 and page 27, lines 3–4 and in the parent United States Patent Application Serial No. 60/311,439 at page 20, lines 14–19 and page 21, lines 1–2.

Claims 2–20 are either dependent upon claim 1 or dependent upon a claim that is itself dependent upon claim 1. Accordingly, this amendment to claim 1 applies to all of claims 1–20.

The Examiner rejected claims 1–20 under 35 U.S.C. § 112, first paragraph, and under 35 U.S.C. § 112 because the previous amendment to claim 1 made by Applicant was purportedly not supported by the specification and therefore constituted new matter. Applicant's withdrawal of that amendment in claim 1 accordingly makes these rejections moot.

B. Rejection of Claims 1–20 Under 35 U.S.C. § 102(a) and (b)

The Examiner has rejected claims 1–20 under 35 U.S.C. § 102(a) and (b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious, over United States Patent No. 4,668,128 to Hartley et al. (the "Hartley et al. patent"), United States Patent No. 4,880,468 to Bowlin et al. (the "Bowlin et al. patent"), United States Patent No. 5,341,882 to Hale (the "Hale patent"), United States Patent No. 5,277,519 to Nahm (the "Nahm patent"), United States

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Patent No. 5,430,237 to Sharp (the "Sharp patent"), United States Patent No. 6,322,489 B1 to Richardson et al. (the "Richardson et al. patent"), or United States Patent No. 5,874,387 to Carpenter et al. (the "Carpenter et al. patent"). As discussed below, a rejection of amended claims 1–20 over these references is untenable because none of these references exemplifies, otherwise discloses or even suggests to one of ordinary skill in the art Applicant's amended claimed process as set forth in claims 1–20. In fact, the processes disclosed in these references are clearly different than Applicant's claimed process, as demonstrated by the dramatically different results obtained by Applicant's claimed process compared with the processes disclosed in the prior art.

C. Subject Matter of the Amended Claims

As referenced hereabove, Applicant's claimed processes are for constructing load-bearing structures such as drilling rig platforms and roads. Load-bearing structures, in particular, roads, must remain durable, stable and resistant to wear caused by thousands of separate applications of heavy vehicle loads. These requirements are now set forth in Applicant's claimed process, which, as noted above, results in a load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single-axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch.

Applicant's claimed process for constructing load-bearing structures comprises the steps of (1) forming a particulate mixture comprising drilling cuttings and either (2) mixing said particulate mixture comprising drilling cuttings with at least one stabilizer selected from a group of stabilizers to form a cementitious second mixture (3) forming said cementitious mixture into the shape and size of the load-bearing structure and (4) causing the shaped and sized second mixture formed in operation (3) to undergo a pozzolanic reaction to form said load-bearing structure or (5) mixing said particulate mixture comprising drilling cuttings with at least one of foamed asphalt and emulsified asphalt to form an asphaltic second mixture, (6) forming said asphaltic second mixture into the shape and size of load-bearing structure and (7) causing the shaped and sized asphaltic second mixture formed in suboperation (5) to form the load-bearing structure by curing said shaped asphaltic second mixture.

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D. Prior Art References Relied on by the Examiner

As discussed in more detail below, none of the prior art references exemplifies, discloses or suggests to one of ordinary skill in the art Applicant's claimed process for constructing load-bearing structures comprising both the claimed steps of forming the cementitious mixture into the shape and size of the load-bearing structure and causing the structure to undergo a pozzolanic reaction so as to achieve Applicant's claimed load-bearing structure having a high resistance to rutting. As noted above, Applicant's claimed load-bearing structure has sufficient resistance to rutting that any rut formed in said surface by 10,000 applications of a single-axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch. Instead, the prior art generally relates to processes for treatment of and burying drilling cuttings in a pit as part of a process for remediation of an area for farming or for the preparation of a slurry added to well bore holes for cementing those well bore holes.

1. United States Patent No. 4,668,128 to Hartley et al.

The Hartley et al. patent treats the drilling cuttings in a pit adjacent to the site. According to the Hartley et al. process, the bottom and sides of the pit are covered with a moisture-impervious liner. Then the pit is filled with drilling cuttings and other ingredients to form a hard surface. In a preferred form, the pit is covered with soil and will hold tractors for farming. The liner also covers the area adjacent to the pit and may cover the pit in some instances. The Hartley et al. patent does not exemplify, disclose or even suggest to one skilled in the art the formation of the load-bearing structure claimed in Applicant's claims 1–20. Indeed, in the preferred embodiment in which soil covers the surface of the pit, ruts deeper than 1 inch would likely be formed with one application over the area of the pit by a single axle load of 18,000 pounds. The liner covering or adjacent to the Hartley et al. filled pit is also likely to be torn and rendered useless by a few applications of the 18,000 pound single axle load. In addition, Applicant's claimed process forms a load-bearing structure onto the affected site and thus is completely different than a process intended to return land to its original condition. (See Column 4, lines 44–45 of the Hartley et al. patent). Accordingly, a rejection of claims 1–20

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under 35 U.S.C. § 102(a) or (b) or 35 U.S.C. § 103(a) over the Hartley et al. patent is untenable and should not be made.

2. United States Patent No. 4,880,468 to Bowlin et al.

The Bowlin et al. patent relates to a process by which a waste solidification composition converts an agglomeration of solid and liquid waste materials into an environmentally safe hard, **soil-like** material (*emphasis added*). (Column 3, lines 65–68). According to the Bowlin et al. patent, “the agglomeration of solid and liquid waste materials is hardened into an environmentally acceptable hard **soil-like** material (*emphasis added*). The hard **soil-like** material can be loaded onto trucks and hauled away for disposal or can be buried on location. (Column 4, lines 62–66) (*emphasis added*). Clearly, ruts of greater than 1 inch would form in the Bowlin et al. **soil-like** material from less than 10,000 applications over the soil-like material by a single axle load of 18,000 pounds. Accordingly, a rejection of claims 1–20 under 35 U.S.C. § 102(a) or (b) or 35 U.S.C. § 103(a) over the Bowlin et al. patent is untenable and should not be made.

3. United States Patent No. 5,341,882 to Hale

The Hale patent process employs a slurry of drilling cuttings and blast furnace slag cements, which are disposed of by injecting the slurry into a well bore annulus, wherein it is hardened. The slurry is used to form a casing. Hale contains no exemplification, disclosure or suggestion of Applicant’s claimed process of forming a load-bearing structure having the claimed resistance to rutting set forth in Applicant’s claims. The process of the Hale patent is not intended to form a load-bearing structure. Accordingly, a rejection of claims 1–20 under 35 U.S.C. § 102(a) or (b) or 35 U.S.C. § 103(a) over the Hale patent is untenable and should not be made because Hale does not exemplify, disclose or even suggest Applicant’s claimed process of forming a load-bearing structure having a high resistance to rutting.

4. United States Patent No. 5,277,519 to Nahm

The Nahm patent relates to a method of disposal of “drilled cuttings” and waste products by a three-stage process. The process comprises drilling a well bore using a drilling fluid

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comprising blast furnace slag and thereby creating drilled solid waste in the drilling fluid; concentrating the drilled solid waste to form concentrated drilled solid waste contaminated with drilling fluid; and solidifying the drilled solid waste contaminated with drilling fluid. (Column 2, lines 20–27). The solidified wastes are disposed of at a drilling site in a mud pit or by such methods as land-farming and landfill. (Column 2, lines 27–32). Accordingly, the objective of the Nahm patent appears to be similar to that of the Hartley et al. patent — *i.e.*, the return of the pit site to its original condition following drilling operations, or by such methods as land-farming and landfill. There is no disclosure, exemplification or suggestion in the Nahm patent of Applicant's claimed process of forming a load-bearing structure having a high resistance to rutting as set forth in Applicant's claims 1–20. Accordingly, a rejection of Applicant's claims 1–20 under 35 U.S.C. § 102(a) or (b) or § 103(a) over the Nahm patent is untenable and should not be made because the Nahm patent does not disclose Applicant's claimed process of forming a load-bearing structure having a high resistance to rutting.

5. United States Patent No. 5,430,237 to Sharp

The Sharp patent relates to a method of solidifying oil-base shale cuttings and used drilling mud on a site so as to form an environmentally safe end product, which may be cultivated into a ground surface without the need for special storage pits or the like. (Column 1, line 58 to Column 2, line 2). In contrast, Applicant's claimed end product is used to form a load-bearing surface having considerable strength, stability and resistance to rutting. The Sharp patent contains no exemplification, disclosure or suggestion to one skilled in the art that the Sharp end product will have sufficient resistance to rutting that any rut formed in the surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting of less than 1 inch. Accordingly, a rejection of Applicant's claims 1–20 under 35 U.S.C. § 102(a) or (b) or 35 U.S.C. § 103(a) over the Sharp patent is untenable and should not be made.

6. United States Patent No. 6,322,489 B1 to Richardson et al.

The Richardson et al. patent relates to a method for restoring wetlands by separating drill cuttings from drilling fluid, mixing the cuttings with a stabilization medium and then filling a

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desired position in a marshland or wetlands with a reconstituted material. (Abstract of Patent). The only exemplification of the type of restoration to take place in the wetlands area set forth in the Richardson et al. patent appears to be wetlands landfill. (Column 3, lines 59–60). The Richardson et al. patent contains no exemplification, disclosure or even suggestion to one skilled in the art of Applicant's claimed process of forming a load-bearing structure in which any rut formed in such surface by 10,000 applications of a single-axle load of at least 18,000 pounds will have a depth of rutting of less than 1 inch. Accordingly, a rejection of claims 1–20 under 35 U.S.C. § 102(a) or (b) or § 103(a) over the Richardson et al. patent is untenable and should not be made as, like many of the prior art patents discussed hereabove, the Richardson et al. patent relates to the formation of landfills and not Applicant's claimed extremely durable load-bearing structures having a high resistance to rutting.

7. United States Patent No. 5,874,387 to Carpenter et al.

The Carpenter et al. patent relates to a method and a drilling fluid/cement slurry composition for cementing a well bore. The cement slurry composition comprises:

- a) a cementitious material;
- b) a drilling fluid; and
- c) a dispersant.

The Carpenter et al. process does not form a load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting of less than 1 inch. In fact, the well bore to which the Carpenter et al. patent's cement slurry composition is added is not intended to be a load-bearing structure. Accordingly, a rejection of claims 1–20 under 35 U.S.C. § 102(a) or (b) or § 103(a) over the Carpenter et al. patent is untenable and should not be made because the Carpenter et al. patent does not exemplify, disclose or even suggest to one skilled in the art the formation of Applicant's claimed load-bearing structures.

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E. Claims 1–20 Are Not Inherently Anticipated or Rendered Obvious By the Prior Art

In prior Office Actions, the Examiner has relied on assertions of inherent anticipation or obviousness in rejecting claims containing limitations not present in the prior art. Applicant disagrees with the Examiner's interpretation of the doctrine of inherency and considers that any use of the doctrine in rejecting claims 1–20 would be untenable. In order to advance the prosecution, Applicant wishes to bring to the attention of the Examiner the following authorities specifying the standard that must be met by the Examiner to establish either anticipation or *prima facie* obviousness by inherency.

The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic to establish either anticipation or *prima facie* obviousness, in view of the following authorities.

In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art).

In re Oelrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’”

In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted) (The claims were drawn to a disposable diaper having three fastening elements. The reference disclosed two fastening elements that could perform the same function as the three fastening elements in the claims. The court construed the claims to require three separate elements and held that the reference did not disclose a separate third fastening element, either expressly or inherently.)

“In relying upon any theory of inherency in order to support either anticipation or *prima facie* obviousness, the examiner must provide a basis in fact and/or technical reasoning to

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reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) (Applicant's invention was directed to a biaxially oriented, flexible dilation catheter balloon (a tube which expands upon inflation) used, for example, in clearing the blood vessels of heart patients). The examiner applied a U.S. patent to Schjeldahl which disclosed injection molding a tubular preform and then injecting air into the preform to expand it against a mold (blow molding). The reference did not directly state that the end product balloon was biaxially oriented. It did disclose that the balloon was "formed from a thin flexible inelastic, high tensile strength, biaxially oriented synthetic plastic material." *Id.* at 1462 (emphasis in original). The examiner argued that Schjeldahl's balloon was inherently biaxially oriented. The Board reversed on the basis that the examiner did not provide objective evidence or cogent technical reasoning to support the conclusion of inherency.).

According to the standard for inherency by the above-noted authorities, rejections of claims 1–20 under 35 U.S.C. § 102(a) or (b) or § 103(a) over the seven references relied upon by the Examiner cannot be made on the basis of inherency because the references do not exemplify, disclose or otherwise suggest to one skilled in the art Applicant's claimed process for making load-bearing structures having a high resistance to rutting. At most, the arguments would constitute speculation that the materials produced in the references could possibly have been used to form a structure. There is no basis whatever for any assertion that such a result necessarily must have been produced by following the teachings of any of the references.

F. The Prior Art Bears Even Less Resemblance to the Dependent Claims Than to Claim 1

Additional limitations of the dependent claims that are unmentioned in the Examiner's previous arguments and have not been found by Applicant in the references include:

" – suboperation (2.1.1) is accomplished in two stages, in the first of which Class C fly ash is mixed with said particulate mixture comprising drilling cuttings and in the second of which Portland cement is mixed into the mixture previously formed

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by mixing Class C fly ash with said particulate mixture comprising drilling cuttings," a limitation of claims 6, 7, 11, 12, 14, and 15; and

- all of the explicit limitations of claims 13–20."

G. As the Examiner Has Not and Cannot Make a *Prima Facie* Case of Obviousness of Claims 1–20 over the Prior Art, Applicant Is Not Required To Demonstrate Unobviousness of the Claims by Experiment Data

In the previous Office Action, the Examiner additionally wrote, "Further, the applicants have not presented actual experimental data showing with certainty the difference of their strength values over prior art." In order to avoid a rejection by the Examiner on similar grounds for rutting resistance, Applicant notes that in the absence of the lack of presentation by the Examiner of a *prima facie* case of obviousness, Applicant has no obligation to provide comparative data. The legal concept of *prima facie* obviousness is a procedural tool of examination which applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process. See *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Saunders*, 444 F.2d 599, 170 USPQ 213 (CCPA 1972); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971), *amended*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not produce a *prima facie* case, Applicant is under no obligation to submit evidence of nonobviousness.

For reasons set forth above, the Examiner cannot present a case that Applicant's claims 1–20 are obvious under 35 U.S.C. § 103(a) over any of the prior art currently relied upon in rejecting Applicant's claims.

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**H. Claims 1–20 Cannot Be Rejected Under 35 U.S.C. § 103(a)
Over a Combination of References**

The mere fact that references *can* be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed. However, the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device, or in this instance, a prior art process, “may be capable of being modified to run the way the apparatus [or process] is claimed, there must be a suggestion or motivation in the reference to do so.” *Id.* As noted above, none of the prior art exemplifies, discloses or suggests to one of ordinary skill in the art Applicant’s claimed load-bearing structure having a high resistance to rutting.

I. Filing of Request for Continued Examination

A Request for Continued Examination has been filed concurrently with the filing of this Response. Accordingly the Response has been properly characterized as being made under 37 C.F.R. § 1.111.

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IV Conclusion

It is believed that the above constitutes a complete response under 37 C.F.R. § 1.111 and that all bases of rejection in the Examiner's Action have been adequately rebutted or overcome. A Notice of Allowance in the next Office Action is, therefore, respectfully requested. The Examiner is requested to telephone the undersigned attorney if any matter that can be expected to be resolved in a telephone interview is believed to impede the allowance of pending claims 1-20 of United States Patent Application Serial No. 10/037,630.

Respectfully submitted,

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John S. Child, Jr.
John S. Child, Jr.

PTO Registration No. 28,833
Dann Dorfman Herrell and Skillman
1601 Market Street, Suite 2400
Philadelphia, PA 19103-2307
TELEPHONE: 215-563-4100
FACSIMILE: 215-563-4044

Attorneys for Scott Environmental Services, Inc.

Correspondence Address

Customer No. 000110
John S. Child, Jr., Esquire
Dann Dorfman Herrell and Skillman
1601 Market Street, Suite 2400
Philadelphia, PA 19103-2307